Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
2016 Biennial Review of Telecommunications Regulations	)	WT Docket No. 16-138
	)	
	)	

To: Wireless Telecommunications Bureau

COMMENTS OF MOBILE FUTURE

Mobile Future respectfully submits these comments in response to the Federal Communications Commission's (the "FCC" or "Commission") initiation of the 2016 Biennial Review of telecommunications regulations.[1] Section 11 of the Communications Act of 1934, as amended, requires the Commission to review its regulations every two years to determine whether any regulations are no longer necessary in the public interest as a result of competition between providers.[2] The market for mobile services is competitive, as evidenced by intense competition on price and specific offerings, nearly ubiquitous consumer adoption of wireless services, and exponentially increasing traffic over wireless networks. In light of the hyper-competitive market, the Commission should use this review to eliminate regulations that reduce providers' incentives to invest further in deploying and enhancing networks that support consumer access to mobile services. Specifically, the Commission should:

- Eliminate the home roaming requirement for both voice and data services to encourage providers to build out their own networks in areas where they hold spectrum rather than piggy-back on others' investments; and

[1] *Commission Seeks Public Comment in 2016 Biennial Review of Telecommunications Regulations*, Public Notice, WT Docket No. 16-138, FCC 16-149 (rel. Nov. 3, 2016).

[2] 47 U.S.C. § 161.

- Modify the spectrum screen to restore the safe harbor for transactions below the threshold and eliminate the enhanced factor review for transactions involving spectrum below 1 GHz.

These regulations are not necessary in the public interest given the extent of competition in the market for mobile services, and they should be eliminated to allow providers to invest in enhancing and expanding their networks and to further increase competition.

I. The Market for Mobile Services is Extremely Competitive

As mobile services play an increasingly essential role in everyday American life and the United States economy, America's many wireless providers aggressively compete on price, service, and device offerings.[3] Competition has driven providers to deliver high quality networks and devices to American consumers, which have in turn increased economic production, resulted in an overall rise in GDP, and created jobs.[4] In addition, mobile broadband has increased mobility, productivity, and innovation and has created new ways of doing business.[5]

Consumers are benefitting as wireless providers continue to compete through differentiated pricing plans and device offers. Several providers have increased data allowances while leaving monthly charges unchanged. For example, AT&T raised the data allowance on one of its plans from 10 GB to 15 GB in 2015.[6] Since then, AT&T has raised the data allowance

---

[3] *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Nineteenth Report, 31 FCC Rcd 10534, 10615 ¶ 112 (WTB rel. Sept. 23, 2016) ("19th Mobile Competition Report") ("As wireless service providers continue to seek a wide range of wireless devices to differentiate their services, manufacturers have responded by increasing the choices, price points, and design within a broad range of devices.").

[4] Jim Kohlenberger, *Mobilizing America: Accelerating Next Generation Wireless Opportunities Everywhere* 6 (Sept. 2015), *available at* http://mobilefuture.org/wp-content/uploads/2015/09/5G-Paper-1.pdf ("Mobile technologies now generate roughly 3.2 percent of U.S. GDP, and support more than 1.3 million jobs.").

[5] *Id*. at 9-10.

[6] 19th Mobile Competition Report, 31 FCC Rcd at 10593 ¶ 83 (citing PR Newswire, AT&T Introduces New AT&T Mobile Share Value Plans (Aug. 14, 2015), http://www.prnewswire.com/news-releases/att-introduces-new-att-mobile-share-value-plans-300128462.html).

to 16 GB for $10 less than the previous offering.[7] Other providers have offered large data plans or family plans at discounted amounts[8] and have continued the trend of offering service plans without term contracts and equipment subsidies in favor of Equipment Installment Plans.[9] Verizon Wireless launched new prepaid pricing in the third quarter of 2016 and introduced "safe mode" to allow customers to choose to avoid overage charges and to carry over unused data to the next month.[10] Furthermore, from 2014 to 2015, the Cellular Consumer Price Index ("CPI") declined 3.8 percent, in contrast to a 0.1 percent increase in overall CPI.[11] During the same time frame, the industry average revenue per reported unit ("ARPU") was $44.65, a 4.3 percent decline since year-end 2014.[12] Every nationwide service provider, along with many regional and smaller service providers, currently offers the most recent iPhone[13] and providers often run promotions on devices in order to gain a competitive edge. For example, carriers have recently offered promotions relating to the new Google Pixel phone and the recently released Apple iPhone 7.[14] A recent T-Mobile promotion encourages consumers to bring the Pixel from other networks to T-Mobile, promising 50 percent of the retail price back when they sign up for T-Mobile service.[15]

---

[7] AT&T, *Mobile Share Advantage*, https://www.att.com/shop/wireless/data-plans.html (last visited Nov. 22, 2016).

[8] 19th Mobile Competition Report, 31 FCC Rcd at 10593 ¶ 83.

[9] *Id*. at 10595 ¶ 86.

[10] Q3 2016 Verizon Communications Incorporated Earnings Call, at 8 (Oct. 20, 2016), http://www.verizon.com/about/investors/quarterly-reports/3q-2016-quarter-earnings-conference-call-webcast.

[11] 19th Mobile Competition Report, 31 FCC Rcd at 10557 ¶ 29.

[12] *Id*.

[13] *Id*. at 10614 ¶ 111.

[14] Aaron Pressman, *Where to Get the Best Deals on the Google Pixel Phone*, FORTUNE.COM (Oct. 28, 2016), http://fortune.com/2016/10/28/best-deals-google-pixel-phone/.

[15] *Bring your Pixel to T-Mobile and Cut its Cost in Half*, T-Mobile News and Blogs (Oct. 27, 2016), https://newsroom.t-mobile.com/news-and-blogs/pixel-offer.htm.

Wireless providers also continue to invest in their networks and to innovate to provide new and advanced services to consumers, leading to ever-increasing data usage and mobile broadband adoption. Indeed, over the past six years, United States wireless service providers have made approximately $177 billion in capital investments.[16] In 2015 alone, wireless providers invested $30.9 billion in assets and infrastructure.[17] Nearly 90 percent of the U.S. population now has access to LTE coverage from at least four service providers, and 99.7 percent of the U.S. population is covered by LTE service from at least two service providers.[18] The 326 million people in the United States have subscriptions for 377.9 million wireless connections, up more than 6 percent over the previous year.[19] Seventy-two percent of American adults own smartphones[20] and Americans increasingly use mobile broadband to access the same applications that they once accessed on wireline services, especially for voice, data, graphics, and video services.[21] Total wireless data usage in the United States was a staggering 9.65 trillion megabytes in 2015.[22] As the Commission recognized in its 19th Mobile Competition Report,

[16] 19th Mobile Competition Report, 31 FCC Rcd at 10552 ¶ 23.

[17] *Id*. at 10553 ¶ 24.

[18] *Id*. at 10562-63 ¶ 37-39.

[19] Jacob Poushter, *Smartphone Ownership and Internet Usage Continues to Climb in Emerging Economies*, Pew Research Ctr. (Feb. 22, 2016), http://www.pewglobal.org/files/2016/02/pew_research_center_global_technology_report_final_february_22__2016.pdf.

[20] *Id*.

[21] *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, Twelfth Broadband Progress Notice of Inquiry, 31 FCC Rcd 9140, 9143, 9152 ¶¶ 8, 35 (rel. Aug. 4, 2016) ("12th Broadband Progress NOI").

[22] CTIA's Wireless Industry Summary Report, Year-End 2015 Results (2015), http://www.ctia.org/industry-data/ctia-annual-wireless-industry-survey.

"[m]obile technology has changed when, where, and how consumers access information and entertainment."[23]

In the United States, 91 percent of data traffic is now on 4G LTE networks, up from 74 percent in 2015.[24] In addition to rapidly deploying 4G LTE service to nearly the entire country, providers are already looking to the future of next generation 5G networks. 5G networks will build on the success of 4G LTE and will serve as the foundation for the growing Internet of Things by providing the network capacity to allow billions of devices to connect and communicate with one another.[25] 5G networks will enable immersive multimedia experiences that use 3D video and ultra high-definition video, including mobile telepresence with 3D rendering capabilities, high resolution devices, head-mounted displays, and wearables in fields such as emergency services, public safety, telemedicine, and professional services.[26] Verizon recently announced its commercial pilot program for 2017, where it will test 5G technology in different environments with several infrastructure providers.[27] AT&T announced it has seen speeds of up to 14 Gbps on 5G technology in the 15 GHz band,[28] and T-Mobile and Ericsson

[23] 19th Mobile Competition Report, 31 FCC Rcd at 10620 ¶ 124 ("Consumers are increasingly using smartphones for getting directions, listening to online music services such as Pandora or Spotify, and watching movies or participating in video calls. Smartphone users generally interact with their devices through specific apps and the increasing use of smartphones has spawned a large and growing mobile app ecosystem.").

[24] CTIA Industry Facts, http://www.ctia.org/industry-data/facts (last visited Nov. 21, 2016).

[25] *See* Elena Malykhina, *Who Cares about 5G Wireless?—You Will*, Scientific American (Sept. 22, 2016), http://www.scientificamerican.com/article/who-cares-about-5g-wireless-you-will/.

[26] 4G Americas LTE Deployment Status Update, North America—USA/Canada (Sept. 1, 2015) at 6, http://www.4gamericas.org/files/7214/4112/1452/North_America_9.1.15.pdf.

[27] Q3 2016 Verizon Communications Incorporated Earnings Call, at 8 (Oct. 20, 2016), http://www.verizon.com/about/investors/quarterly-reports/3q-2016-quarter-earnings-conference-call-webcast.

[28] Mike Dano, *AT&T Seeing 14 Gbps to One User, 5 Gbps to Two Users in 5G Tests*, FierceWireless (Aug. 11, 2016), http://www.fiercewireless.com/tech/at-t-seeing-14-gbps-to-oneuser-5-gbps-to-two-users-5g-tests.

recently achieved data transfer speeds of 12 Gbps and ultra-low latency of less than 2 milliseconds during a 5G test.[29]

II. The Commission Should Eliminate Home Roaming Requirements for Both Voice and Data Services

The Commission should eliminate its requirement that host carriers provide voice and data roaming services to requesting carriers in areas where the requesting carriers hold spectrum rights.[30] The Commission's roaming framework attempts to balance promoting consumer access to nationwide mobile coverage with incenting providers to invest in and deploy networks across the country. Indeed, investment in and deployment of advanced networks across the country are prerequisites to nationwide mobile coverage and will need to continue in order for providers to meet increasing consumer demands for faster networks capable of carrying more data, particularly as the United States deploys next generation 5G networks. The Commission should eliminate the home roaming requirement because it is no longer necessary given the vigorous competition in the market and to restore balance to the roaming framework.

The Commission's initial decision six years ago to require home roaming was designed to allow carriers to rely on other networks to fill in coverage gaps while building out newly licensed spectrum.[31] However, now that LTE deployment is widespread, carriers have had ample opportunities both to acquire necessary spectrum and to build out their networks, and competition is stronger than ever, home roaming requirements are no longer justified.[32] Instead,

---

[29] Neville Ray, *The Un-carrier Road to 5G*, T-Mobile (Sept. 20, 2016), https://newsroom.tmobile.com/news-and-blogs/the-un-carrier-road-ahead.htm.

[30] 47 C.F.R. § 20.12. Specifically, the Commission should adopt exclusions to the rules governing both voice and data roaming to exclude roaming requirements in areas in which the requesting provider holds spectrum rights.

[31] *Reconsideration of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, Order on Reconsideration, 25 FCC Rcd 4181, 4190-91 ¶ 19 (2010).

[32] As one example, T-Mobile has engaged in a series of secondary market transactions over the last several years and its network now covers more than 311 million Americans. John Legere, *It's Official. T-Mobile is #1 in BOTH*

the current home roaming requirements allow requesting providers to piggyback indefinitely on other providers' networks.[33] The current framework diminishes incentives for requesting providers to invest in further building out networks by enabling them instead to rely on competitors' networks existing deployments and diminishes host providers incentives to invest by reducing their ability to recover their investments and to differentiate themselves based on service quality.[34] Home roaming requirements are no longer in the public interest and should be eliminated.

III. The Commission Should Modify the Spectrum Screen to Reestablish the Safe Harbor and Eliminate the Enhanced Factor for Reviewing Acquisitions of Spectrum Below 1 GHz

The Commission should modify the spectrum screen to restore the screen's original function as a safe harbor for spectrum transactions that fall below the specified threshold and to eliminate the enhanced factor review for transactions involving spectrum below 1 GHz.[35] Efficient and transparent secondary markets are critical to sound spectrum policy and ensuring that spectrum is put to its highest and best use. A transparent spectrum screen can work to promote competition and the public interest by mitigating regulatory uncertainty and streamlining administrative review of spectrum transactions, limiting regulatory analysis to markets that may actually have competitive issues. However, the policies adopted in the 2014 *Mobile Spectrum Holdings Report and Order* allowing for review of transactions that fall below

---

Customer Satisfaction & Networks Speed!, T-Mobile (Aug. 4, 2016), https://newsroom.t-mobile.com/news-and-blogs/customer-satisfaction-network-speed.htm?icid=WMM_TM_NTWRK_IJT9NCN55AE6177.

[33] *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, Report and Order, 22 FCC Rcd 15817, 15836 ¶ 49 (2007) ("[I]f a carrier is allowed to 'piggy-back' on the network coverage of a competing carrier in the same market, then both carriers lose the incentive to build out into high cost areas in order to achieve superior network coverage.").

[34] In addition to fostering investment, eliminating the home roaming requirement may also facilitate more efficient spectrum use. In some circumstances, providers may choose to divest spectrum licenses they are not using in order avail themselves of the remaining roaming regime, allowing another provider to put that spectrum to use.

[35] 47 C.F.R. § 20.22(a). The relevant rule refers to the policies set forth in the 2014 *Mobile Spectrum Holdings Report and Order*.

the screen and adopting an enhanced factor for reviewing certain transactions for spectrum below 1 GHz do not further these goals and should be eliminated.[36]

When the Commission first employed the spectrum screen in 2004, it explained that the "screen was intended to eliminate from further review those markets in which there is clearly no competitive harm relative to today's generally competitive marketplace – rather than to identify conclusively markets in which there is competitive harm."[37] However, in practice the Commission has not adhered to these principles. The Commission moved further away from this approach in the *Mobile Spectrum Holdings Report and Order*, explicitly deciding not to adopt a safe harbor.[38]

Going forward, the Commission should apply the screen as it was originally intended - as an absolute safe harbor when spectrum holdings are below a certain threshold, and with spectrum aggregation levels exceeding the threshold subject to case-by-case review. This will afford providers considering acquisitions of additional spectrum certainty that the transaction will not be subject to further regulatory review if it falls below the threshold, and that in other cases the Commission will balance the procompetitive effects of allowing providers to make business judgments about the value of spectrum and how best to put it to use against any alleged anticompetitive effects. As Commissioner Pai explained in his dissent from the *Mobile Spectrum Holdings Report and Order*, the Commission proposed its mobile spectrum holdings policies "with the promise of providing needed transparency and predictability to secondary market

[36] *Policies Regarding Mobile Spectrum Holdings*, Report and Order, 29 FCC Rcd 6133 (2014).

[37] *Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corp. for Consent to Transfer Control of Licenses and Authorizations*, Memorandum Opinion and Order, 19 FCC Rcd 21522, 21568-69 ¶¶ 108-09 (2004).

[38] See, *Policies Regarding Mobile Spectrum Holdings*, Notice of Proposed Rulemaking, 27 FCC Rcd at 11714-15 ¶ 8 ("The Commission does not, however, limit its consideration of potential competitive harms in proposed transactions solely to markets identified by its initial screen.").

transactions," but instead adopted "only a black box."[39] Returning to a true safe harbor approach in combination with case-by-case review will provide the benefit of regulatory certainty associated with a bright-line rule while permitting spectrum acquisition above certain amounts so long as the transaction remains in the public interest.

The Commission should also eliminate the enhanced factor for reviewing transactions involving spectrum below 1 GHz.[40] The rationale for that factor has been undermined by the growth of intense competition in the industry and more reliance on spectrum above 1 GHz. As the Commission has long recognized, different spectrum bands have different propagation characteristics and deployment requirements with their own benefits and drawbacks depending on the circumstances and demands of various consumers and markets. Further, these analyses are constantly changing as technological capabilities evolve. As just a couple of examples, technological developments now make it possible to provide high-capacity transmission via mmW spectrum bands that were previously written off as junk bands, and providers routinely employ spectrum above 1 GHz in 4G LTE networks. Sprint, which advocated for a cap on "beachfront" sub-1 GHz spectrum holdings just a few years ago, apparently changed its assessment and recently explained, "We did not participate in the 600 MHz auction not because … we didn't have the money at the time or were under-resourced for it. It is just simply … a spectrum of the past. The world is moving towards high capacity wireless data networks, and in that world the best and most efficient spectrum … is mid-band spectrum."[41] Technological developments in the wireless space can occur rapidly, and the Commission should not substitute

[39] Dissenting Statement of Commissioner Ajit Pai, *Policies Regarding Mobile Spectrum Holdings*, Report and Order, 29 FCC Rcd at 6268 (2014).

[40] *Policies Regarding Mobile Spectrum Holdings*, Report and Order, 29 FCC Rcd 6133, 6230-31 ¶¶ 256-258 (2014).

[41] Remarks of Tarek Robbiati, Chief Financial Officer, Sprint Corporation, Bank of America Merrill Lynch America Leveraged Finance Conference (Nov. 30, 2016), http://seekingalpha.com/article/4027398-sprints-s-management-presents-bank-america-merrill-lynch-leveraged-finance-conference?page=6.

its static judgment for providers' own technical and operational assessments of the utility of particular spectrum bands. This principle is increasingly true as providers look to deploy 5G networks, which will employ a wide range of spectrum bands. As Commissioner O'Rielly expressed in his statement dissenting from the *Mobile Spectrum Holdings Report and Order*, "Substituting the proven success of market-based spectrum allocation with the Commission's subjective judgment goes against the spirit … of the law [and] will result in consumer-harming inefficiencies."[42]

IV. CONCLUSION

The increasingly competitive nature of the wireless industry warrants removal of the rules identified above because they are no longer necessary. The Commission should use the opportunity the biennial review of regulations affords to focus on eliminating regulations that hamper the incentive and ability of providers to invest in building out their networks to provide better service to all American consumers.

Respectfully submitted,

By: /s/ Diane Smith
Diane Smith
Allison Remsen
MOBILE FUTURE
1325 Pennsylvania Avenue, N.W., Suite 600
Washington, D.C. 20004
(202) 756-4154
www.mobilefuture.org

December 5, 2016

[42] Dissenting Statement of Commissioner Michael P. O'Rielly, *Policies Regarding Mobile Spectrum Holdings*, Report and Order, 29 FCC Rcd at 6275 (2014).